

CLAIMS

1. A data reader arranged to read data comprising user data and non-user data written across at least two channels of a data-holding medium, 5 said data being arranged into a plurality of data items each containing user data and non-user data, with said non-user data holding information relating to said user data, including write pass number information, and data items written across the said channels at the same time being identified as a set of data items, said data reader holding a current write 10 pass number and having a read head for reading a respective said channel of said data-holding medium to generate a data signal comprising said data items, and processing circuitry arranged to receive and process said data signals of a set of data items, including processing said write pass number information of each of said data items in said set, and causing 15 updating of said current write pass number held by said data reader on the basis of the write pass number information of said data items in said set.

2. A data reader according to claim 1, wherein said write pass number information is contained within a header for each said data item, 20 said header including header error detection information, and said processing circuitry processes said header error detection information and said write pass number information for each said data item in said set before updating said current write pass number.

25 3. A data reader according to claim 2, wherein said processing circuitry causes updating of said current write pass number held by said data reader on the basis of said write pass number information of said headers of each said data item in said set which are correct.

4. A data reader according to claim 2, wherein said circuitry updates said write pass number if at least a given number of said correct headers agree on it.

5 5. A data reader according to claim 2, wherein said circuitry updates said write pass number if there is at least a given number of said correct headers and all of those have the same write pass number.

6. A data reader according to claim 4 or claim 5, wherein said given number is variable.

7. A data reader according to claim 1, wherein said processing circuitry interrupts processing when said write pass number information is such as to cause an update, to enable further processing circuitry to check said write pass number information to confirm the updating.

8. A data storage device incorporating a data reader according to claim 1.

20 9. A method of reading data comprising user data and non-user data written across at least two channels of a data-holding medium, said data being arranged into a plurality of data items each containing user data and non-user data, with said non-user data holding information relating to said user data, including write pass number information and data items written 25 across the said channels at the same time being identified as a set of data items, said method comprising:

reading each said channel of said data-holding medium;
generating a data signal comprising said data items for each said channel;
processing said data signals of a set of data items including determining a 30 write pass number from said write pass number information of each of said data items in said set; and

updating a current write pass number held by a data reader on the basis of said write pass numbers of said data items in said set.

10. A method according to claim 9, wherein said write pass number
5 information is contained within a header for each said data item, with said header including header error detection information, and the step of processing said data signals includes processing said header error detection information to determine which of said headers is in error.

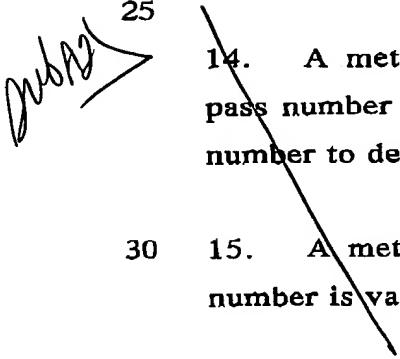
10 11. A method according to claim 10, wherein said step of processing said data signals comprises determining which of said headers of said data items in said set are correct, determining the write pass numbers of those data items and comparing the write pass numbers of said data items with the current write pass number held by said data reader.

15 12. A method according to claim 11, wherein said step of comparing the write pass numbers of said data items includes determining how many of said correct headers have the same write pass number, and whether that number of headers exceeds a given number.

20 13. A method according to claim 11, wherein said step of comparing the write pass numbers of said data items includes determining whether there are at least a given number of correct headers, and whether all of those have the same write pass number.

25 14. A method according to claim 12 or claim 13, wherein said write pass number of said data items is compared with said current write pass number to determine whether updating is required.

30 15. A method according to claim 12 or claim 13, wherein said given number is variable.

Dub 123 

16. A computer readable medium having stored therein instructions for causing a processing unit to execute the method of claim 9.